

FSA Integration Partner

United States Department of Education
Federal Student Aid



ITA Architecture Maintenance Goals Report IV

Task Order #118

Deliverable # 118.1.2d

Version 1.0

October 30, 2003



Table of Contents

1	Introduction	2
1.1	ITA Overview	2
1.2	Executive Summary	2
2	Pre-Production Environments	3
2.1	Development/Testing/Staging Environment.....	3
3	ITA Product Software	4
3.1	Table of ITA Product Software	4
4	Infrastructure Updates and Enhancements	6
4.1	Updates and Enhancements Matrix.....	6
4.2	Updates and Enhancements Log.....	7
4.3	Outstanding Issues	14
5	Reusable Common Services (RCS).....	15
APPENDIX A – ITA NON-PRODUCTION ENVIRONMENT DIAGRAMS		
APPENDIX B – ITA OPERATIONS SUPPORT SCHEDULE		
APPENDIX C - ITA ORGANIZATIONAL CHART		
APPENDIX D – STATISTICAL SUMMARY OF ITA ISSUE TROUBLESHOOTING		



1 Introduction

1.1 ITA Overview

The Integrated Technical Architecture (ITA) provides a standardized, reusable infrastructure for enabling business capabilities within the FSA application community. The long-term vision of the ITA is to provide an integrated, enterprise-wide technical architecture that will enable FSA to reduce the number of custom-built applications that are difficult and costly to update and maintain.

1.2 Executive Summary

The ITA Architecture Maintenance Goals Report IV (October 31, 2003) documents the architecture maintenance services provided by the ITA team between October 1 and October 31, 2003. These maintenance services were provided to FSA applications using ITA product software and Reusable Common Services hosted in the ITA development, testing, and staging environments. The following is a brief overview of the contents of each section of this report:

Section 1 Introduction:

- Provides an overview of the contents of this report.

Section 2 Environments:

- Describes the pre-production environment (development, testing, staging) and includes a detailed diagram of this environment.
- Lists successfully provided environments and includes a diagram of these environments.

Section 3 ITA Product Software:

- Provides a summary of ITA product software.

Section 4 Infrastructure Updates and Enhancements:

- Provides an overview of the updates and enhancements section of this document.
- Summarizes the updates and enhancements that were performed between October 1 and October 31, 2003

Section 5 Reusable Common Services (RCSs)

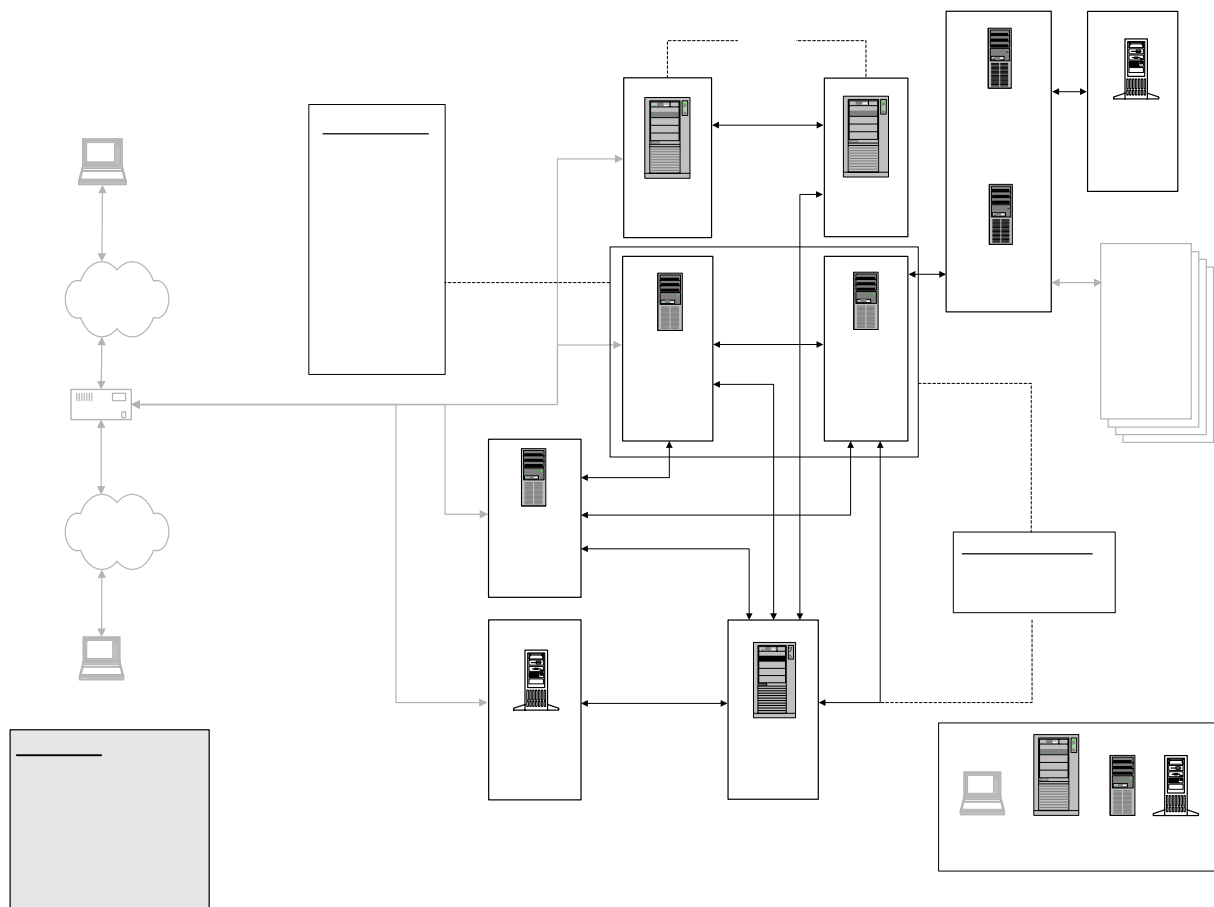
- Summarizes the changes to any RCSs hosted in the ITA architecture.

2 Pre-Production Environments

2.1 Development/Testing/Staging Environment

The pre-production environments consist of development, testing, and staging. In the development environment, the application teams develop components that will be used in various applications. These components are then tested for functionality in the testing environment. The final area of pre-production, staging, offers the opportunity to prepare the components before their migration to the production environment.

2.1.1 Pre-Production Environment Diagram





3 ITA Product Software

Another key objective of ITA Architecture Maintenance Services is to provide product software maintenance. This section provides the details of the ITA product software such as Software, Environment, and Current Version.

3.1 Table of ITA Product Software

The table below presents details of what product software is installed in which environment and what version of the software has been installed in that environment.

Software	Environment*	Current Version
IBM HTTP Server (IHS)	Dev, Tst, Stg	v1.3.26
WebSphere Application Server (WAS)	Dev, Tst, Stg	v3.5.6 V5.0.1
Autonomy	Dev, Tst, Stg	v3.1.13.2
eNetwork Dispatcher	Dev, Tst, Stg	v4.0.2.25
Interwoven	Dev, Tst, Stg	v5.0.1
Microstrategy	Dev, Tst, Stg	v7i
Solaris	Dev, Tst, Stg	v2.8

*Dev = development, Tst = testing, Stg = staging



IBM HTTP Server (IHS)

IBM's web serving offering is based upon the Apache web server. The implementation that IBM has custom tailored allows for tight integration into the IBM WebSphere applications and other IBM products. It allows for the serving of multiple web documents, while providing necessary application interaction.

IBM WebSphere Application Server (WAS)

The IBM WebSphere Application Server manages, deploys, programs, and integrates development like IBM's WebSphere. It makes use of Java technology compatibility for most web application offerings. One of its most useful features is that it is a highly configurable solution for a small offering or a large enterprise. It is the middleware between the HTTP servers and the databases.

Autonomy

Through the use of Autonomy the entire Internet offering is easily parsed into a searchable resource. Users can seamlessly search for content throughout enterprise offered information. It does this through its connectors that combine varying forms of resources (databases, HTML pages, e-mails, etc.) into one easily accessible resource.

Network Dispatcher

This IBM product is an integrated portion of the IBM Edge Server. Network Dispatcher provides load balancing. It administers the resource balancing between clusters of web servers and application servers. It is one of many components within the ITA network architecture that allows for high availability.

Interwoven TeamSite

As a product of the Interwoven Platform, TeamSite enables content contribution, collaboration, and management across the enterprise. It provides the necessary components to streamline business processes, integrate currently used productivity tools, and accelerate all eBusiness initiatives.

Microstrategy

This product provides reporting, analysis, and information delivery capabilities.

Solaris

Sun Solaris is the Unix based operating system (OS) running on the HP and Sun servers.



4 Infrastructure Updates and Enhancements

4.1 Updates and Enhancements Matrix

The updates and enhancements log included in Section 4.2 of this document provides detailed information for development, testing, staging, and performance environment issues addressed with updates or enhancements between October 1 and October 31, 2003. The matrix is organized chronologically by application name.

This matrix consists of the following categories:

- **Date Opened:** Provides the date the issue was opened.
- **Application:** Denotes the name of the application.
- **Description:** Offers a description of the issue.
- **Environment:** Lists the environment(s) in which the issue occurred (Development, Test, Staging, and Performance).
- **Resolution:** Summarizes steps taken by the ITA team to resolve an issue.
- **Priority:** Provides the issue's level of priority ranging (high, medium, low).
- **Issue Status:** Indicates the issue's status (open, closed).
- **Issue Resolution/Target Date:** Provides the issue's resolution date or target date.
- **Approximate Time Spent:** The number of hours spent resolving the issue.



4.2 Updates and Enhancements Log

Date Opened	Project	Env	Description	Resolution	Priority	State	Issue Resolution/ Target Date	Approx. Time Spent (hours)
10/6/2003	eCampus Based	Dev.	When attempting to access the /www/dev/cbs/data/fisapextract directory the following sequence of messages are received. Can the directory be restored?	The disk that stores the /www directory on su35e5 went bad. After contacting CSC about the problem, CSC replaced the disk and then restored the directory. With the new disk and restored directory, the /www directory and all subdirectories were restored to their proper state.	3-Normal	Closed_Resolved	10/8/2003	12
10/22/2003	eCampus Based	Dev.	The updated eCB for WAS5.0 has been completed and we would like to request to move them to the new WAS5.0 directory for testing. The EAR and JAR files have been created for the load. Please let us know how the files can be sent.	Created a WAS 5.0 environment and installed the eCB EAR file in the dev50 environment on su35e5.	3-Normal	Closed_Resolved	10/27/2003	3
10/16/2003	FAFSA	Demo Dev.	We need to have a new FAFSA Demo Dev environment created on HPL3 and HPA2.	Created a FAFSA Demo environment in the dev50 environment on hpl3 and hpa2. Also created the corresponding deploy, restart, and permissions scripts.	3-Normal	Closed_Resolved	10/27/2003	2



Date Opened	Project	Env	Description	Resolution	Priority	State	Issue Resolution/ Target Date	Approx. Time Spent (hours)
10/28/2003	FAFSA	Demo Dev.	We need to have the demodev datasources set up. One for the PIN DB and one for the TempSave DB. Name them DemoPINDS and DemoTempSaveDS or something like that. The datasource information for these two should be taken from the existing demo datasource on the ITA Sun Servers.	Created the following DataSources for FAFSA Demo in the Dev environment on hpa2: DemoPINDS jdbc:oracle:thin:@hvp2:1650:EACDEMO DemoTempAppDS jdbc:oracle:thin:@hvp2:1648:FAFSADDEM	2-High	Closed_Resolved	10/28/2003	2
10/28/2003	FAFSA	Demo Dev.	We don't have write access and ncsmerge is not the owner of the /www/dev50/fotwdemo directory.	Updated the permissions, group, and owner as requested.	2-High	Closed_Resolved	10/28/2003	1
10/2/2003	FAFSA	Dev.	Install the UtilityApp into the dev environment on hpa2.	Added the UtilityApp to the WAS configuration on hpa2. Created the Datasources, deploy scripts, and restart scripts as requested. Deployed the UtilityApp.ear to the server and the application is running successfully.	2-High	Closed_Resolved	10/8/2003	3
10/15/2003	FAFSA	Dev.	Cannot access any SSL pages on the FAFSA Dev site. Getting a "Page not found" error.	The SSL certificates and keyfiles on the FAFSA dev site expired on Oct. 14. As a result, the SSL portion of the site could not be accessed. To resolve the issue, we created new SSL certificates and keyfiles and the SSL portion of the site is now accessible.	1-Emergency	Closed_Resolved	10/15/2003	1



Date Opened	Project	Env	Description	Resolution	Priority	State	Issue Resolution/ Target Date	Approx. Time Spent (hours)
10/21/2003	FAFSA	Dev.	<p>At this time the old dev 3.5.6 environment can be turned off, this will need to coincide with the switching of the dev URLs.</p> <p>Currently, the test URLs for FAFSA/PIN on WAS 5.0 are: http://dev50.fotw.sfa.ed.gov:5080/ https://dev50.fotw.sfa.ed.gov:5443/ http://dev50.pin.ed.gov:5081/ https://dev50.pin.ed.gov:5444/</p> <p>We need to switch these URLs with the regular dev URLs http://dev.fotw.sfa.ed.gov:8531/ https://dev.fotw.sfa.ed.gov:8443/ http://dev.pin.ed.gov:8531/ https://dev.pin.ed.gov:8460/</p> <p>This change can be made whatever day is convenient, preferably in the afternoon as the PINQA utility is typically utilized in the morning.</p>	Updated the FAFSA and PIN dev URLs to point to the WAS 5.0 site as requested. Shut down the 3.5.6 sites.	3-Normal	Closed_Resolved	10/21/2003	1
10/28/2003	FAFSA	Dev.	Need to have read access to the oracle 8.1.7 dirs: oracle/app/oracle/product/8.1.7/jdbc/lib/classes12.zip	Adjusted the permissions to grant read access to the requested directories.	2-High	Closed_Resolved	10/20/2003	1



Date Opened	Project	Env	Description	Resolution	Priority	State	Issue Resolution/ Target Date	Approx. Time Spent (hours)
10/28/2003	FAFSA	Dev.	Need R2T4 datasource added to the FAFSA dev and test environments. The datasource should have the following properties: DataSource Name: FOTWR2T4DataSource JNDI Name: jdbc/FOTWR2T4DataSource (Dev) URL=jdbc:oracle:thin:@4.20.14.15:1695:R2T4DEV (Test) URL=jdbc:oracle:thin:@4.20.14.15:1696:R2T4TST enableMultithreadedAccessDetection= false	Added the FOTWR2T4DataSource to both the Dev and Test environments on hpa2 as requested.	2-High	Closed_Resolved	10/28/2003	1
10/21/2003	FAFSA	Test	Need the following ID added to the FAFSA and PIN test envs: ID - eacdemo password - demoeac This will be used for the EAC conf.	Added the eacdemo id and password to the FAFSA and PIN 5.0 environments in dev and test as requested.	2-High	Closed_Resolved	10/21/2003	1
10/21/2003	FSANet	Dev	Request for assistance in troubleshooting issues while creating the FSANet EAR file for WAS 5.0 deployment. Having trouble connecting to the application database.	The application was looking for the host "hpn25" to connect to the database. The hostname was not included in the developer's hostfile and as a result, the connection was failing. Suggested the developer place hpn25 in the hostfile and the issue was resolved.	3-Normal	Closed_Resolved	10/24/2003	3



Date Opened	Project	Env	Description	Resolution	Priority	State	Issue Resolution/ Target Date	Approx. Time Spent (hours)
10/6/2003	IFAP	Test	The Development and Test websites for IFAP and Schools Portal are not responding.	<p>The disk that stores the /www directory on su35e5 went bad. After contacting CSC about the problem, CSC replaced the disk and then restored the directory. With the new disk and restored directory, the /www directory and all subdirectories were restored to their proper state.</p> <p>With the restored /www directory intact, WAS 3.5 was able to startup in dev and test and the applications became accessible.</p>	1-Emergency	Closed_Resolved	10/8/2003	12
10/20/2003	PIN	Test	The test PIN site needs a real SSL cert, instead of a self-signing cert for testing the PIN Web Services. After the new cert was installed last week, users of the web services are now getting an 'untrusted cert' error. They would then have to code around this by putting either code in place that trusts all certs(a bad thing) or specifically add our test servers as trusted clients. We want them to only have to trust the same signing authority as they would in production.	Contacted CSC to renew the Verisign trusted SSL certificates for the PIN test and performance environments. CSC updated the certificates as requested.	1-Emergency	Closed_Resolved	10/21/2003	10
10/29/2003	PIN	Test	We need to add a new link for "epin" to the PIN ear file. After we deploy the new EAR file in today's merge we need to have the plug-in file regenerated and updated on IHS.	Regenerated the plugin file as requested and redistributed to the Web Servers.	2-High	Closed_Resolved	10/29/2003	1



Date Opened	Project	Env	Description	Resolution	Priority	State	Issue Resolution/ Target Date	Approx. Time Spent (hours)
10/10/2003	Schools Portal	Test	Request to add user indcyj to the portldev group on su35e5.	Added the user indcyj to the portldev group as requested.	3-Normal	Closed_Resolved	10/13/2003	1
10/6/2003	Students Portal	Dev, Test	Create a WAS 5.0 dev and test environment and install the EAR file containing Students and FP Portals.	Created the WAS 5.0 environments on su35e5 as requested and installed the Portals EAR file. Also created deploy and restart scripts and provided assistance in troubleshooting database and search functionality issues.	3-Normal	Closed_Resolved	10/24/2003	15
10/10/2003	Students Portal	Test	Request for write access for all folders and files under the /www/dev/portals/ and /www/tst/portals/ folders for the Indus group (portldev). We need this in order to finish testing the students survey.	Updated the permissions as requested.	3-Normal	Closed_Resolved	10/10/2003	1
10/10/2003	Students Portal	Test	Request to grant permission to users evchen and indcyj to execute the restart_students.sh and restart_portals.sh scripts in test and dev.	Added the specified usernames to the sudo list of users for the Portals applications on su35e5. The users now have permission to run the restart_portals script using the sudo command. The restart_students script is for the Students.gov application so it was not included in this request.	3-Normal	Closed_Resolved	10/13/2003	1
10/20/2003	Students Portal	Test	Request to be granted permission in the list of other group in order to modify template files since there are many files shared by other at /iwmnt/default/main/FP/* and /iwmnt/default/main/students/*	Changed the group permissions of the Students and FP Portals directories to grant the requested access. Updated the Students Portal directory groups to "stportal". Updated the FP Portal directory groups to "fpportal".	2-High	Closed_Resolved	10/20/2003	1



Date Opened	Project	Env	Description	Resolution	Priority	State	Issue Resolution/ Target Date	Approx. Time Spent (hours)
10/6/2003	XML Registry	Dev, Test	Create a WAS 5.0 dev, test, and pre-production environment and install the XML Registry EAR file.	Created the WAS 5.0 environments on hpl5 and hpl9 as requested and installed the XML Registry EAR file. Also created deploy and restart scripts and provided assistance in troubleshooting various issues in the testing phases.	3- Normal	Closed_ Resolved	10/17/2003	15



4.3 Outstanding Issues

There were no outstanding issues in the pre-production environments as of October 31, 2003.



5 Reusable Common Services (RCS)

The RCS provides common technical and business services that are required for virtually every web-based application within FSA. These services can be built once and reused across all the applications. ITA Release 4.0 is maintaining the existing RCS library. The following list details changes made to any RCS(s) maintained in Release 4.0.

- **Search RCS:** the Search RCS was maintained and its functionality for IFAP was changed so that search results now display a document's URL and date.



APPENDIX A – ITA NON-PRODUCTION ENVIRONMENT DIAGRAMS



APPENDIX B – ITA OPERATIONS SUPPORT SCHEDULE



APPENDIX C - ITA ORGANIZATIONAL CHART



APPENDIX D – STATISTICAL SUMMARY OF ITA ISSUE TROUBLESHOOTING